REMARKS

Claims 1-33 are pending in the application. Claims 1, 5, 8, 17, 22, 23, and 32 have been amended. No claims have been canceled. No claims have been allowed.

Claims 8, 12, and 22 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

Claims 1-6, 8-15, 17-20, 22-27, 29-30, and 32-33 were rejected under 35 U.S.C. § 102(b) as being anticipated by Donnelly, et al. (U.S. Patent No. 6,049,776), hereinafter "Donnelly".

Claims 7, 11, 16, 21, 22, 28, and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Donnelly in view of Rassman (U.S. Patent No. 4,937,743), herein after "Rassman".

Rejections under 35 U.S.C. § 112

Claims 8, 12, and 22 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Office Action states that these claims were amended to include the limitation of the completion of the scheduling process without the resolution of any conflict. The Office Action further states that the Examiner can only find wherein the resource scheduling can continue without resolving conflicts, but not to the point of completion. The Examiner requests that the Applicant direct the Examiner to any passage in the specification that clearly teaches the completion of scheduling without the resolution of any conflicts.

Applicants respectfully traverse the rejection. Applicants respectfully direct the Examiner to the following passages of the specification, which will be listed below and discussed in the order presented:

Page 5, line 18-page 6, line 2;

Page 7, lines 11-15;

Page 8, lines 7-10;

Page 9, lines 10-14;

Page 10, lines 5-6;

Page 10, lines 13-17;

Page 14, lines 10-11; and

Page 25, lines 11-12.

Page 5, line 18-page 6, line 2: One embodiment of the invention is a method for providing a real-time indication of resource conflicts in a resource scheduling process carries out on the system 100 by software instructions. For example, one embodiment includes a hosted application used by a call center that requires complex scheduling of many employees. Applicants respectfully submit that such an application is known in the art to generate a complex schedule that shows where and when many resources, such as employees, will be assigned to work on a daily and hourly basis. See for example, Figure 5, which shows graphically how each employee is assigned on an hourly basis.

Page 7, lines 11-15: In one embodiment, as a scheduler inputs changes into a working schedule, a real-time indication is presented to the user if the alteration in the schedule affects a parameter or criteria adversely and will impair the overall functionality of the schedule. Applicants respectfully submit that this passage clearly states that a schedule is produced, but the schedule may have impaired functionality. The user has the option to continue with the scheduling process according to the scheduling application or program, even though the user has been informed that a conflict exists and the functionality of the schedule may be impaired.

Page 8, lines 7-10: The display of the conflict or scheduling problem would not interfere with the normal operation of the scheduling program, the user can continue to alter the schedule. Applicants respectfully submit that this passage clearly states that the normal operation of the scheduling program is not interfered with by the display of the conflict or scheduling problem. The normal operation of any program is to proceed to completion. The normal operation of a scheduling program is to proceed to completion by generating a complete schedule.

Page 9, lines 10-14: The suppression of the conflict does not impede the real-time identification of other conflicts. If an additional conflict is identified, a new red light is displayed in conjunction with the yellow light indicating a new conflict as well as the multiple warnings or conflicts that are suppressed. Applicants respectfully submit that this passage clearly states that the scheduling process or program continues when

conflicts are suppressed (unresolved), and that multiple conflicts can exist as the scheduling process continues. Therefore, it is plainly stated here that conflicts do not stop the process, from which one must conclude that the completion of the process – generation of a complete schedule – follows.

Page 10, lines 5-6: Once a conflict occurs, an indication of the conflict is presented to the user in such a manner as to not interfere with his or her use of the application. Applicants respectfully submit that not interfering with the use of the application clearly means that the application can continue to be used as intended. The use of the application is to generate a completed complex resource schedule. Therefore this passage, yet again, clearly teaches the completion of scheduling without the resolution of any conflicts.

Page 10, lines 13-17: This passage states that rule based conflict information is conveyed to the user without interrupting the scheduling process. The passage further states that, similarly, conflicts due to a calendar event are communicated to the user without disrupting the normal operation of the scheduling program. The normal operation of the scheduling process, when not disrupted or interrupted, results in the generation of a complete schedule. Applicants respectfully submit that this passage clearly teaches the completion of scheduling without the resolution of any conflicts.

Page 14, lines 10-11: This passage states that the user may ignore the conflict until a new schedule is created. Applicants respectfully submit that this is a plain statement that the user may ignore a conflict, yet a new schedule is created. Applicants respectfully submit that this passage clearly teaches the completion of scheduling without the resolution of any conflicts.

Page 25, lines 11-12: In the Abstract it is stated that the indication [of a resource conflict] is presented in an unobtrusive manner so as not to interfere or impede the scheduling process. Applicants respectfully submit that the unimpeded scheduling process results in a completed schedule. Therefore, Applicants respectfully submit that this passage clearly teaches the completion of scheduling without the resolution of any conflicts.

Applicants have amended claims 8, 12, and 22 to more fully protect the invention. The amendments to claims 8, 12, and 22 were not motivated by patentability considerations. Applicants respectfully submit that claims 8, 12, and 22 are patentable under 35 U.S.C. § 112, first paragraph, and earnestly request withdrawal of the rejection.

Rejections under 35 U.S.C. § 102

Claims 1-6, 8-15, 17-20, 22-27, and 29-30, were rejected under 35 U.S.C. § 102(b) as being anticipated by Donnelly. Donnelly teaches a human resources management system (RMS) including a server and an RMS database that stores information on employees, employee skills, schedules, and projects. Calendar functionality is included for maintaining the scheduled activities of the employees. (Abstract). A user can search for employees with certain skills and availabilities for assignment to projects. Project time requirements, skill requirements and proficiency levels can be included in the search. An assignment functionality assigns identified employees to projects and updates a system calendar to reflect the assignments. (Abstract).

Donnelly thus discloses a set of databases and a system to access them. Donnelly does not disclose a resource scheduling application, program or system. Donnelly does not teach or suggest automatically generating a complex schedule of many resources, but is more analogous to a networked manual calendar management system (similar to Outlook). As clearly stated in the Abstract of Donnelly, calendar functionality is included for maintaining the scheduled activities of the employees.

According to Donnelly, a user can search for and review information in the database, such as information about employees and their skill sets and availabilities. The user can then select an employee and attempt to manually schedule the employee for an activity. If there is a conflict, for example a time conflict in which the selected employee is already scheduled for an activity at the required time, the user must a) override ("the original calendar entry is deleted (inactivated) and the new entry is added"), or b) leave the schedule unchanged ("the original calendar entry is retained and a new calendar entry for the conflict date is not added"). (column 18, lines 30-52). A conflict may not remain unresolved. The user must manually resolve any errors in order

to continue. Thus, Donnelly teaches modal error identification. Donnelly does not teach real-time error identification as described herein, which includes conveying unobtrusively to a user an indication that a resource conflict exists, concurrently with the resource scheduling process, and allowing the user the ability to choose a) to divert from a current process to resolve the error, or b) to complete the current process without diverting from this process and without resolving the error. Nor does Donnelly teach a "scheduling" process as commonly understood in the art to include, for example, automatic complex schedule generation software. Rather, Donnelly teaches a database system that allows a user to manually schedule one employee at a time by giving the user access to information about each employee and noticing when a proposed manual assignment conflicts with the current information. Donnelly then requires correction of the conflict or withdrawal of the assignment.

Donnelly further lacks any teaching or suggestion regarding rule based conflicts. For example, with reference to Figure 6, Applicants disclose that predetermined rules may be violated by, for example, giving an employee an invalid start time, violating a maximum hours/day allotment for an employee, or giving an employee a schedule that does not match the employee's work patterns for the week.

Claim 1 as amended recites:

> A computer implemented method for performing complex resource scheduling of many resources, the method comprising:
> providing a real-time indication of resource scheduling conflicts during the computer-implemented method;
> analyzing resource scheduling data including real-time detection of resource conflicts, wherein resource conflicts include rule based conflicts and calendar based conflicts;
> generating an indication that a resource conflict exists concurrent with the computer-implemented method; and
> in response to a user input, automatically continuing with the scheduling method without resolving the conflict, including detecting further resource conflicts and generating further indications that resource conflicts exist.

Applicants respectfully submit that Donnelly does not teach at least the following limitation: a computer-implemented method for performing complex resource

scheduling of many resources; analyzing resource scheduling data including real-time detection of resource conflicts, wherein resource conflicts include rule based conflicts and calendar based conflicts, or in response to a user input, automatically continuing with the scheduling method without resolving the conflict, including detecting further resource conflicts and generating further indications that resource conflicts exist.

The Office Action states on page 11 that the Examiner disagrees with Applicants' assertion that "Donnelly does not teach wherein a conflict may remain unresolved". Applicants once again respectfully assert that Donnelly does not teach continuing a scheduling method as claimed without resolving the conflict. Donnelly (e.g., column 18, lines 6-52) teaches that a user is notified of each schedule conflict and asked whether to override the conflict. If the user overrides, the original calendar entry is deleted and the new entry is added. This resolves the conflict because the original, conflicting entry is deleted. Otherwise (that is, if the user does not override), the original entry is retained and the new entry for the conflict date is not entered. In other words, the schedule is not updated at all, and the employee's calendar is not altered, and the employee is not scheduled for the activity. For example, if the user is attempting to schedule an employee for an activity that conflicts with the employee's existing calendar, the user has two choices: one choice is eliminating the conflict by deleting and replacing the conflicting entry; the other choice is eliminating the conflict by choosing not to schedule the employee for the conflicting activity. In either case, the conflict cannot be allowed to exist. In either case, the "process" is interrupted and the user must resolve the conflict. In the latter case, the case of choosing not to schedule the employee for the conflicting activity, the "process" is not only interrupted, but is incomplete because the employee is not scheduled for the activity as the user intended.

For these reasons, Applicants respectfully submit that it has been shown that Donnelly does not teach the limitation of claim 1 just discussed. On that basis alone, Applicants respectfully submit that claim 1 is not anticipated by Donnelly. However, in the interest of being more fully responsive to every point raised in the Office Action, Applicants further wish to rebut the statement in the Office Action on page 12 that Donnelly teaches resource conflicts that are rule based. The cited section of Donnelly,

column 18, lines 6-12 merely describes part of the information to be entered manually by the user when the user is altering an employee's calendar. The cited section is reproduced below:

> The beginning and ending times providing the hours for the calendar entry are entered in the Begin Time and End Time fields. Furthermore, 2-Week Repeating Pattern Check Boxes provide entries for specifying a 2-Week pattern for schedule entries during the beginning and ending date range. Selections of the check boxes are made by mouse clicking.

Applicants respectfully assert that the passage above describes entry fields that can be filled by the user. The passage above does not teach or even suggest that a rule based conflict exists, or that a rule based conflict can be or is associated with the fields or the information in the fields, or that there is any relationship between the fields and any conflict. Applicants respectfully submit that Donnelly simply does not disclose analyzing resource scheduling data including real-time detection of resource conflicts, wherein resource conflicts include rule based conflicts and calendar based conflicts as claimed.

For all of these reasons, Applicants respectfully submit that claim 1 is not anticipated by Donnelly.

Applicants respectfully assert that dependent claims 2-7 include further limitations on allowable claim 1 and are therefore allowable for the same reasons.

Applicants wish to address the statements in the Office Action regarding the hyperlink limitation, as found for example in claim 5. Although Applicants have already shown that claim 5 is patentable over Donnelly, Applicants wish to be completely responsive to every point in the Office Action.

At page 12, the Office Action states that Figure 28 and column 18 of Donnelly disclose a hyperlink as defined below:

> A connection between an element in a hypertext document, such as a word, phrase, symbol or image, and a different element in the document, another hypertext document, a file, or a script. The user activates the link by clicking on the linked element, which is usually underlined in a color different form the rest of the document to indicate that the element is linked. Hyperlinks are indicated in a hypertext document through tags in

markup language such as SGML and HTML. These tags are generally not visible to the user.
(Computer Dictionary, Microsoft Press, Third Edition, 1997)

Applicant respectfully disagrees with the Examiner's interpretation of Figure 28 and column 18. Donnelly fails to disclose or suggest a hyperlink, much less a hyperlink to a relevant portion of the resource scheduling process allowing the resource scheduling conflict to be resolved. The Office Action cites the override button of column 18, lines 39-46 and Figure 28 as well as the popping up of the "Notification of Schedule Change Screen" as examples of hyperlinks. Applicants respectfully disagree that these are examples of hyperlinks. Donnelly teaches screens that are modal in that they come up to allow the user to choose to override or backtrack from an action just taken. The screen is a visual representation only at the time that data is entered, and only allows a user to decide whether to accept or reject the new schedule and old schedule data. In this particular case the override button causes a command to be performed, specifically the override button "inactivates the calendar entry and the entry is deleted from the list box. The calendar entry will no longer appear on the employee's calendar." (column 22, lines 13-17). This is an invocation as further described below. The override button is thus not a hyperlink, which is defined as connection between an element in a hypertext document, such as a word, phrase, symbol or image, and a different element in the document, another hypertext document, a file, or a script.

Similarly, the popping up of the "Notification of Schedule Change Screen" is not a hyperlink. Column 18, lines 44-46 state that if schedule entries are added by someone other that the individual, the Notification of Schedule Change Screen of FIG. 30 is invoked. This is clearly stated as an invocation. To invoke is "To call or activate; used in reference to commands and subroutines." (Computer Dictionary, Microsoft Press, Third Edition, 1997). Therefore, what is disclosed is an action (addition of entries by someone other that the individual) that invokes a process by calling or activating the process. Applicants respectfully submit that Donnelly as cited clearly teaches away from a hyperlink.

Claim 8 recites:

A system for providing real-time indication of resource scheduling conflicts in a resource scheduling process, the system comprising:

a user interface receiving data from a user;

a processor coupled to the user interface, wherein the processor is capable of executing instructions;

a display device coupled to the processor; and

a memory device coupled to the processor, the memory device storing instructions comprising a resource scheduling software application for performing complex scheduling of many resources, the application comprising,

a resource scheduling process, wherein the resource scheduling process includes, analyzing agent data, analyzing scheduling criteria, and detecting resource conflicts; and

an error identification process, wherein the error identification process is concurrent with the resource scheduling process, and wherein descriptions of identified resource conflicts and potential resolutions of the identified resource conflicts are conveyed to the user concurrent with the resource scheduling process, and wherein the resource scheduling process is configured such that normal operation of the scheduling process is independent of resolution of any conflicts.

Applicants respectfully submit that claim 8 is not anticipated by Donnelly. The manual schedule modification that is described at column 18, lines 30-52 of Donnelly illustrates that Donnelly does not teach or suggest a system providing real-time indication of resource scheduling conflicts in a resource scheduling process as claimed. Donnelly therefore does not teach an error identification process concurrent with the resource scheduling process as described. When an error is detected in Donnelly, such as a time conflict between an employee's current calendar and the attempted change to the calendar, the user must delete the current entry and replace it, or decide not to make the change. In other words, the conflict must be manually resolved. There is no disclosure regarding a resource scheduling software application for performing complex scheduling of many resources, wherein the resource scheduling process is configured such that normal operation of the scheduling process is independent of resolution of any conflicts, as claimed. On the contrary, Donnelly teaches that the employee sought to be scheduled must either not be scheduled at all, or the conflicting calendar entry must be deleted before proceeding to schedule the employee. For at least these reasons, Applicants respectfully submit that claim 8 is not anticipated by Donnelly.

Applicants respectfully assert that dependent claims 9-11 include further limitations on allowable claim 8 and are therefore allowable for the same reasons.

Claim 12 as amended recites:

> A computer-readable medium containing executable instructions which, when executed in a processing system, cause the system to:
> analyze resource scheduling data via a resource scheduling process and detect a resource conflict;
> convey unobtrusively to a user an indication that the resource conflict exists concurrently with the resource scheduling process; and
> present to the user, upon selecting the indication, a description of the resource conflict and a potential solution to resolve the conflict, wherein the user may elect to continue normal operation of the resource scheduling process without resolving any conflicts, including conveying to the user indications that that at least one further conflict exists.

Applicants submit that as previously discussed, Donnelly fails to disclose that the user may to elect to continue normal operation of the resource scheduling process without resolving any conflicts, including conveying to the user indications that further conflicts exist. Donnelly, for example at column 18, lines 30-52, clearly prohibits continuing to alter the employee's schedule until the conflict is resolved by abandoning the attempt to make the conflicting calendar entry, or deleting and replacing the conflicting calendar entry. Therefore, Donnelly prohibits more than one conflict from existing at one time. Donnelly thus teaches away from conveying to the user indications that that at least one further conflict exists. For all of these reasons, Applicants respectfully submit that claim 12 is not anticipated by Donnelly.

Applicants respectfully assert that dependent claims 13-16 include further limitations on allowable claim 12 and are therefore allowable for the same reasons.

Claim 17 recites:

> A system for providing real-time identification of resource scheduling conflicts, the system comprising:
> at least one server comprising at least one storage device storing executable instructions;
> at least one client processor coupled to the server through a network, wherein the instructions, when executed, cause the at least one client processor to,

analyze agent data and scheduling criteria to detect a resource conflict;

concurrently convey an identification of the resource conflict;

present, upon selection, a description of the resource conflict;

present a potential solution to resolve the resource conflict; and

generate a resource schedule in the presence of unresolved conflicts, including detecting further conflicts.

Applicants respectfully submit that Donnelly does not teach the generation of a schedule at all, but instead is limited to a method for changing individual records in a database. With reference to the discussion of column 18, lines 20-52 above (for example, with respect to claim 12), Applicants submit that Donnelly further fails to teach at least the generation of a resource schedule in the presence of unresolved conflicts, including detecting further conflicts. For at least these reasons, Applicants submit that claim 17 is not anticipated by Donnelly.

Applicants respectfully assert that dependent claims 18-21 include further limitations on allowable claim 17 and are therefore allowable for the same reasons.

Claim 22 as amended recites:

A method for providing real-time identification of resource scheduling conflicts in a computer program for performing complex scheduling of a plurality of resources, the method comprising:

analyzing resource scheduling data via a resource scheduling process including-real-time detection of resource conflicts;

providing a real-time indication of resource scheduling conflicts during execution of the computer program, including a visual indication;

receiving a user input to suppress the resource conflict, wherein the visual indication of the resource conflict uses a first color for unsuppressed resource conflicts and a second color for suppressed resource conflicts, and wherein suppression of the resource conflict allows the computer program to continue executing to generate a complex schedule with at least one unresolved conflict;

presenting to the user a description of the resource conflict and a potential solution to resolve the resource conflict, wherein the potential solution includes a hyperlink to a relevant portion of the resource scheduling process allowing the resource scheduling conflict to be resolved.

Applicants respectfully submit that Donnelly does not teach or suggest a method for providing real-time identification of resource scheduling conflicts in a computer program for performing complex scheduling of a plurality of resources. Donnelly is limited to a system and method for manually changing calendar entries for individual employees given information about the employees that may be provided from different sources.

With reference to the foregoing analysis, Donnelly further fails to disclose that suppression of the resource conflict allows the computer program to continue executing to generate a complex schedule with at least one unresolved conflict. For at least these reasons, Applicants respectfully submit that claim 22 is not anticipated by Donnelly.

Claim 23 as amended recites:

> A method for providing real-time identifications of resource scheduling conflicts in a computer program for automatically generating complex resource schedules, the method comprising:
> analyzing resource scheduling data including real-time detection of resource conflicts;
> conveying unobtrusively to a user an indication that a resource conflict exists, wherein the conveying of the indication of the resource conflict occurs concurrently with the resource scheduling process and wherein the indication of a resource conflict includes identifying at least one resource associated with the resource conflict; and
> presenting to the user a description of the resource conflict and a potential resolution of the resource conflict, wherein the potential solution includes a hyperlink to a relevant portion of the resource scheduling process allowing the resource scheduling conflict to be resolved;
> if no input is received in response to the indication, continuing with generating the complex schedule, wherein the complex schedule includes the conflict.

Donnelly does not disclose or suggest a method for providing real-time identifications of resource scheduling conflicts in a computer program for automatically generating complex resource schedules as claimed. For the reasons previously given in detail, Donnelly further fails to disclose that if no input is received in response to the indication [of a resource conflict], continuing with generating the complex schedule, wherein the complex schedule includes the conflict. For these reasons alone, Applicants respectfully submit that claim 23 is not anticipated by Donnelly.

Applicants respectfully assert that dependent claims 24-31 include further limitations on allowable claim 23 and are therefore allowable for the same reasons.

Claim 32 as amended recites:

> A method for generating a resource schedule including concurrent error identification, the method comprising:
> receiving scheduling data in a resource scheduling process, including receiving data input by a user;
> determining whether a conflict exists on the basis of the received data, including determining whether a conflict is a resource specific conflict;
> determining whether a resource specific conflict is rule based or calendar based;
> presenting the user with the option to view additional information about a conflict; and
> presenting the user with the option to suppress a conflict, wherein suppressing a conflict comprises saving information related to the conflict and generating the resource schedule including the unresolved conflict.

Applicants respectfully submit that Donnelly lacks teaching regarding determining whether a resource specific conflict is rule based or calendar based as claimed. Donnelly further lacks teaching regarding suppressing a conflict, wherein suppressing a conflict comprises saving information related to the conflict and generating the resource schedule including the unresolved conflict. Applicants refer the Examiner to the foregoing detailed arguments regarding the Donnelly disclosure, which are equally applicable here. Applicants only wish to state here that there is absolutely no teaching in Donnelly regarding saving information related to the conflict. The Office Action cites column 18, lines 6-62 of Donnelly, but Applicants do not find the indicated disclosure there. This section of Donnelly has been discussed in detail above and the discussion will not be repeated here. For all of these reasons, Applicants respectfully submit that claim 32 is not anticipated by Donnelly.

Claim 33 includes the limitations of claim 32 and an additional limitation of presenting the user with a hyperlink to a location in a resource scheduling process at which a determined conflict may be resolved by the user. Applicants submit that claim 33 is not anticipated by Donnelly for the same reasons given with reference to claim 32.

Rejections under 35 U.S.C. § 103

Claims 7, 11, 16, 21, 22, 28, and 31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Donnelly in view of Rassman, U.S. Patent 4,937,743 (hereinafter "Rassman").

With reference to claims 7, 11, 16, 21, and 28, Rassman was cited for teaching colors as an indication of a resource conflict. Rassman teaches using graphics to show that two scheduling resources are incompatible. Rassman discloses a description of a schedule, rather than of data that is going to be used to do scheduling, as claimed and described by the Applicants. Rassman does not disclose showing indicators in the background, concurrently with a scheduling process as claimed. For this reason alone, Applicants submit that the claims would not have been obvious to one of ordinary skill in that art in view of Donnell and Rassman.

In addition, however, Rassman does not supply the deficiencies of Donnelly so as to achieve a method as claimed in claim 1, a system as in claim 8, a medium as in claim 12, a system as in claim 17, a method as in claim 22, a method as in claim 23, or a method as in claim 32. At least because Donnelly does not disclose a system or method for automatically generating a complex schedule of many resources as disclosed and claimed, one of ordinary skill seeking to achieve such a system or method with the addition of particular conflict indicia would not be motivated to combine the references as suggested.

Because the suggested combination does not yield a system or method as claimed in the independent claims, Applicants respectfully submit that the combination does not yield the invention as claimed in dependent claims, which have additional limitations. Therefore, claims 7, 11, 16, 21, 22, 28, and 31 would not have been obvious to one of ordinary skill in the art in view of the cited references.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1-33 are in condition for allowance. The allowance of the claims is earnestly requested. The Examiner is invited to call the undersigned if there are any issues that remain to be resolved prior to allowance of the claims.